The Compound 2-Hexyl, 5-Propyl Resorcinol has a Key Role in Biofilm Formation by the Biocontrol Rhizobacterium *Pseudomonas chlororaphis* PCL1606

Sandra Tienda, Zaira Heredia-Ponce, Eva Arrebola, Claudia E. Calderón, Gerardo Cárcamo-Oyarce , Leo Eberl, Antonio De Vicente and Francisco M. Cazorla

The production of the compound 2-hexyl-5-propyl resorcinol (HPR) by the rhizobacterium *Pseudomonas chlororaphis* PCL1606 (PcPCL1606) is crucial for fungal antagonism and biocontrol activity against the phytopathogenic fungis. The production of HPR is also involved in plant root colonization. This pleiotrophic response prompted us to study the potential role of HPR production in biofilm formation. The swimming motility of PcPCL1606 is enhanced by the disruption of HPR production. Mutants deficient in HPR production, revealed that colony morphology, adhesion and typical air–liquid interphase pellicles were all dependent on HPR production. The role of HPR production in biofilm architecture was analyzed at the initial stage of biofilm maturation using flow-through flow cells chambers . These experiments revealed that the HPR mutant cells had less tight unions than those producing HPR, suggesting an involvement of HPR in the production of the biofilm matrix by PcPCL1606.